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Revision Date 2015-12-14

Revision Number 1

1. Identification of the substance/preparation and of the Company/undertaking

Product Identifier

Product Type Welding powder
Product name **Deloro 6325 powder**
Product code KSPN1018-3

Other means of identification

Synonyms No information available

Recommended use of the chemical and restrictions on use

Recommended Use Wear and Corrosion Resistant Welding Consumable. For use in industrial installations only.

Uses advised against None reasonably foreseeable

Details of the Supplier of the Safety Data Sheet

Emergency Telephone Number

Emergency Telephone Number CHEMTREC: +1-703-527-3887 (INTERNATIONAL)
1-800-424-9300 (NORTH AMERICA)

NRC (National Response Center) USA, Poison Centres +1 800 222 1222
Canada, IWK Regional Poison Center +1 902 470 8161 or 1 800 565 8161

Prepared by Kennametal Inc. 1600 Technology Way Latrobe, PA 15650, USA
E-mail k-corp-product.safety@kennametal.com

2. Hazards Identification

Classification

Skin sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1

Label Elements

Emergency Overview

DANGER

Hazard Statements

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Suspected of causing cancer. Causes damage to organs through prolonged or repeated exposure.



Precautionary Statements - Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wear respiratory protection. In case of inadequate ventilation wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention Specific measures (see .? on this label) Specific treatment is urgent (see supplemental first aid instructions on this label) **Skin** Immediately call a POISON CENTER or doctor/physician. IF ON SKIN: Gently wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. **Inhalation** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. **Ingestion** IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

Precautionary Statements - Storage

Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

Appearance metallic Powder

Physical State solid

Odor none

Hazards not otherwise classified (HNOC)

Welding Hazards

CAUTION. Welding will create fumes which may be toxic. If welding is performed on plated or coated materials such as galvanised or painted steel, excessive fume may be produced which contains additional hazardous components, and may result in metal fume fever or other health effects. Arc Rays can injure eyes and burn skin. Electric shock can kill. The product and work surface will be hot during and after welding.

Other Hazards

No known effects under normal use conditions.

Unknown Aquatic Toxicity

4.725% of the mixture consists of ingredient(s) of unknown toxicity

3. Composition/Information on Ingredients

Chemical name	Formula	CAS-No	weight-%	GHS Classification
Nickel	Ni	7440-02-0	> 50	STOT RE 1 (H372) S,7 Carc. 2 (H351) S,7 Skin Sens. 1 (H317) S,7 Aquatic Chronic 3 (H412)
Chromium	Cr	7440-47-3	10 - 25	Not classified
Silicon Metal	Si	7440-21-3	3 - 5	Not classified
Iron	Fe	7439-89-6	3 - 5	Not classified
Boron	B	7440-42-8	3 - 5	Not classified
Molybdenum	Mo	7439-98-7	2.5 - 3	Not classified
Copper	Cu	7440-50-8	2.5 - 3	Aqua. Acute 1 (H400)

Carbon	C	7440-44-0	0.1 - 1	Aqua. Cron. 3 (H412) M=1 Not classified
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* The exact percentage (concentration) of composition has been withheld as a trade secret.

NOTE This product may contain additional substances with a content of less than 0.1 % per substance, which are not listed. May contain additional substances in a range up to 2 % which are not classified hazardous or may not contribute to the products overall classification.

Full text of H-Statements referred to under sections 2 and 3

H317 - May cause an allergic skin reaction
H351 - Suspected of causing cancer if inhaled
H372 - Causes damage to the following organs through prolonged or repeated exposure if inhaled: Lungs
H412 - Harmful to aquatic life with long lasting effects

4. First aid measures

FIRST AID MEASURES

General advice Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Eye Contact Keep eye wide open while rinsing. Call a physician immediately. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin contact Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash off immediately with soap and plenty of water.

Inhalation Move to fresh air. Immediate medical attention is required. If not breathing, give artificial respiration.

Ingestion Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Rinse mouth.

Self-protection of the first aider Wear suitable gloves. Self-protection of the first aider.

Most important symptoms and effects, both acute and delayed

4.2. Most important symptoms and effects, both acute and delayed CNS and psychiatric effects, Parkinson-like symptoms. Languor, sleepiness and weakness in legs. A stolid masklike appearance of face, emotional disturbances such as uncontrollable laughter and spastic gait with tendency to fall in walking and findings in more advanced cases. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically. May cause sensitization by inhalation and skin contact. May cause sensitization of susceptible persons.

5. Fire-fighting measures

Suitable extinguishing media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Extinguishing media which must not be used for safety reasons none.

Specific hazards arising from the Non-combustible, substance itself does not burn but may decompose upon heating to

chemical produce corrosive and/or toxic fumes Thermal decomposition can lead to release of irritating and toxic gases and vapors May cause sensitization by inhalation and skin contact
Carbon oxides

Protective equipment and precautions for firefighters Use personal protective equipment as required In the event of fire, wear self-contained breathing apparatus

Component Information

Chemical name	Extinguishing Media for Fires (Suitable)	Extinguishing Media for Fires (Unsuitable)
Chromium	Use extinguishing media appropriate for surrounding fire.	Do not use carbon dioxide, which may form an explosive mixture with powdered chromium.
Silicon Metal	SMALL FIRES: Dry chemical, sand, water spray, foam.; LARGE FIRES: Water spray, fog, foam	-

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions See Section 12 for additional Ecological Information.

Environmental precautions Avoid release to the environment.

Methods and material for containment and cleaning up Pick up and transfer to properly labeled containers. Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust.

7. Handling and Storage

Precautions for safe handling Do not eat, drink or smoke when using this product. In case of insufficient ventilation, wear suitable respiratory equipment. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes, skin and clothing. Wear suitable protective clothing. Use only with adequate ventilation. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Conditions for safe storage, including any incompatibilities

Storage Keep in properly labeled containers. Keep container tightly closed in a dry and well-ventilated place. Keep containers tightly closed in a cool, well-ventilated place.

Incompatible products None known based on information supplied.

Specific use(s) Welding. Restricted to professional users. For use in industrial installations only.

8. Exposure Controls/Personal Protection

Control parameters

Exposure Guidelines

Exposure Guidelines

Chemical name	USA - ACGIH TLV	USA - OSHA PEL	USA - NIOSH IDLH	Argentina	Brazil
Nickel	1.5 mg/m ³ TWA (inhalable fraction)	1 mg/m ³ TWA	10 mg/m ³ IDLH	TWA: 1.5 mg/m ³	-
Chromium	0.5 mg/m ³ TWA	1 mg/m ³ TWA	250 mg/m ³ IDLH	TWA: 0.5 mg/m ³	-
Silicon Metal	-	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)	Not Listed	TWA: 10 mg/m ³	-
Molybdenum	10 mg/m ³ TWA (inhalable fraction); 3 mg/m ³ TWA (respirable fraction)	Not Listed	5000 mg/m ³ IDLH	TWA: 10 mg/m ³ TWA: 3 mg/m ³	-
Copper	0.2 mg/m ³ TWA (fume)	0.1 mg/m ³ TWA (fume); 1 mg/m ³ TWA (dust and mist)	100 mg/m ³ IDLH (dust, fume and mist)	TWA: 0.2 mg/m ³ TWA: 1 mg/m ³	-
Chemical name	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec	Canada - Manitoba

Nickel	1.5 mg/m ³ TWA	0.05 mg/m ³ TWA	1 mg/m ³ TWA (inhalable)	1 mg/m ³ TWAEV	1.5 mg/m ³ TWA (inhalable fraction)
Chromium	0.5 mg/m ³ TWA	0.5 mg/m ³ TWA	0.5 mg/m ³ TWA	0.5 mg/m ³ TWAEV	0.5 mg/m ³ TWA
Silicon Metal	-	10 mg/m ³ TWA (total dust); 3 mg/m ³ TWA (respirable fraction)	10 mg/m ³ TWA (total dust)	10 mg/m ³ TWAEV (containing no Asbestos and <1% Crystalline silica, total dust)	-
Molybdenum	10 mg/m ³ TWA (total); 3 mg/m ³ TWA (respirable)	3 mg/m ³ TWA (respirable); 10 mg/m ³ TWA (inhalable)	10 mg/m ³ TWA (metal, inhalable); 3 mg/m ³ TWA (metal, respirable)	-	10 mg/m ³ TWA (inhalable fraction); 3 mg/m ³ TWA (respirable fraction)
Copper	0.2 mg/m ³ TWA (fume); 1 mg/m ³ TWA (dust and mist)	1 mg/m ³ TWA (dust and mist); 0.2 mg/m ³ TWA (fume)	0.2 mg/m ³ TWA (fume); 1 mg/m ³ TWA (dust and mist)	0.2 mg/m ³ TWAEV (fume); 1 mg/m ³ TWAEV (dust and mist)	0.2 mg/m ³ TWA (fume); 1 mg/m ³ TWA (dust and mist, as Cu)
Chemical name	Chile	Mexico OEL (TWA)	Peru	Uruguay	Venezuela
Nickel	TWA: 0.8 mg/m ³	1 mg/m ³ TWA LMPE-PPT	1.5 mg/m ³ TWA	1.5 mg/m ³ TWA (inhalable fraction)	TWA: 1.5 mg/m ³
Chromium	TWA: 0.4 mg/m ³	0.5 mg/m ³ TWA LMPE-PPT	-	0.5 mg/m ³ TWA	TWA: 0.5 mg/m ³
Silicon Metal	-	10 mg/m ³ TWA LMPE-PPT (inhalable fraction)	10 mg/m ³ TWA (inhalable fraction); 4 mg/m ³ TWA (respirable fraction); 5 mg/m ³ TWA (welding fumes)	-	TWA: 10 mg/m ³
Molybdenum	-	-	-	10 mg/m ³ TWA (inhalable fraction); 3 mg/m ³ TWA (respirable fraction)	TWA: 10 mg/m ³ TWA: 3 mg/m ³
Copper	TWA: 0.16 mg/m ³ TWA: 0.8 mg/m ³	0.2 mg/m ³ TWA LMPE-PPT (fume, as Cu); 1 mg/m ³ TWA LMPE-PPT (dust and mist, as Cu)	0.2 mg/m ³ TWA (fume); 1 mg/m ³ TWA (dust and vapor)	0.2 mg/m ³ TWA (fume); 1 mg/m ³ TWA (dust and mist, as Cu)	TWA: 0.2 mg/m ³ TWA: 1 mg/m ³
Carbon	-	2 mg/m ³ TWA LMPE-PPT (dust)	-	-	-

NIOSH IDLH: Immediately Dangerous to Life or Health

Other Exposure Guidelines Hexavalent Chrome may be formed during welding.

Chemical name	Derived No Effect Level (DNEL)	Predicted No Effect Concentration (PNEC)
Nickel	4 mg/m ³ short term local inhalation; 0.05 mg/m ³ long term local inhalation	0.0035-0.0218 mg/l freshwater; 0.0023 mg/l marine water
Chromium	0.5 mg/m ³ local inhalation	-
Iron	3 mg/m ³ local inhalation	-
Molybdenum	11.17 mg/m ³ longterm local inhalation	-
Copper	-	Freshwater 7.8 µg/l, marine water 5.2 µg/l, soil 65 mg/kg dw
Carbon	10 mg/m ³ systemic inhalation	-

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye Protection Wear safety glasses with side shields (or goggles).

Skin Protection Wear suitable gloves. Wear suitable protective clothing.

Hand Protection Protective gloves. The product and work surface will be hot during and after welding. Ensure adequate protection is in place to stop individuals from burning themselves.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling.

Biological standards

9.1 Information on basic physical and chemical properties

Physical State	solid	Appearance	metallic, Powder
Odor	none	Melting point / melting range	965-1040 °C / 1770-1900 °F
flash point	not applicable	Vapor Pressure	not applicable
Vapor Density	not applicable	Water solubility	Insoluble in water
Autoignition temperature	N/A	Dynamic viscosity	solid
Density	8.44 g/cm ³	Explosive properties	not applicable

9.2. Other information

VOC Content (%) Not Applicable

Component Information

Chemical name	Mol. Weight	Water Solub.	Vap. Press.	Vap. Dens.	pH Val.	Autoign. Temp.	Evap. Rate	Boil. Temp.
Nickel	58.69 g/mol	-	1 mmHg at 1810 °C	-	-	-	-	-
Chromium	51.99 g/mol	-	-	-	-	-	-	2642 °C
Silicon Metal	28.08 g/mol	<1 mg/L	-	-	-	-	-	-
Iron	55.84 g/mol	-	0.000001 hPa at 25 °C	-	-	>100 °C	-	-
Boron	10.81 g/mol	-	0.0000156 atm at 2140 °C	-	-	-	-	-
Molybdenum	95.95 g/mol	0 mg/L at 20 °C	-	-	-	-	-	4612 °C at 101.3 hPa
Copper	63.54 g/mol	-	0 hPa at 1400 °C	-	-	-	-	2567 °C
Carbon	12.01 g/mol	-	-	-	-	300 - 500 °C	-	-
Chemical name	Density	Melt. Temp.	Flash Point	Water Sol.	Bulk Dens.	Odor	State	color
Nickel	8.9 g/cm ³ at 25 °C	-	-	insoluble	-	-	-	-
Chromium	7.19 g/cm ³ at 20 °C	1900 °C	-	insoluble	-	-	-	grey
Silicon Metal	2.33 g/cm ³ at 25 °C	1410 °C	-	-	-	-	-	dark grey; dark brown
Iron	7.87 g/cm ³ at 25 °C	1539 °C	-	insoluble	3000 - 4000 kg/m ³	-	-	-
Molybdenum	10.2 g/cm ³ at 20 °C	2617 °C (sublimes)	-	insoluble	-	-	-	-
Copper	8.89 g/cm ³ at 20 °C	1083 °C	-	insoluble	-	odorless	-	red
Carbon	-	>=3500 °C	-	insoluble	0.25 - 0.75 kg/m ³ at 20 °C	-	-	-

10. Stability and Reactivity

Reactivity	Stable under normal conditions
Chemical stability	Stable under normal conditions.
Possibility of Hazardous Reactions	None under normal processing.
Conditions to avoid	Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.
incompatible materials	Acids. Strong oxidizing agents.
Hazardous decomposition products	Thermal decomposition can lead to release of toxic/corrosive gases and vapors.

11. Toxicological Information

Information on likely routes of exposure

Inhalation	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Eye Contact	Contact with eyes may cause irritation. Particulates may cause irritation due to mechanical abrasion. May cause eye irritation with susceptible persons.
Skin contact	Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Prolonged contact may cause redness and irritation. Prolonged skin contact may defat the skin and produce dermatitis. May cause sensitization by skin contact.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion may cause irritation to mucous membranes.

Chemical name	Oral LD50	dermal LD50	Inhalation LC50
Nickel	>9000 mg/kg bw	Data waiving - Other Justification	NOAEC >=10.2 mg/L air
Chromium	LD50 >5000 mg/kg bw	Data waiving - Study Scientifically Unjustified	LC50 >5.41 mg/L air (analytical)
Silicon Metal	LD50 >3160 mg/kg bw	LD50 >5000 mg/kg bw	Acutely Non Toxic
Iron	= 984 mg/kg (Rat)	-	-
Boron	650 mg/kg (Rat)	Not Listed in C&L Inventory	Not Listed in C&L Inventory
Molybdenum	LD50 >2000 mg/kg bw	Not Classified	LC50 >3.92 mg/L air
Carbon	> 10000 mg/kg (Rat)	-	-

Information on toxicological effects

Chemical name	US ACGIH - Critical effects
Nickel	dermatitis; pneumoconiosis
Chromium	skin and upper respiratory tract irritation
Copper	metal fume fever (fume)

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation	Repeated exposure may cause skin dryness or cracking.
Sensitization	May cause sensitization of susceptible persons.
MUTAGENIC EFFECTS	None known.
Carcinogenicity	This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

Chemical name	ACGIH	IARC	NTP: (National Toxicity Program)	OSHA
Nickel	A5 - Not Suspected as a Human Carcinogen	Nickel Compounds: Group 1 - Known Human Carcinogen	Reasonably Anticipated To Be A Human Carcinogen	Not Listed

		- Nickel, Metallic & Alloy: Group 2B - Possible Human Carcinogen		
Chromium	A4 - Not Classifiable as a Human Carcinogen	Group 3 - Not Classified as a Human Carcinogen	Long-Term Exposure Studies for Which Technical Reports Were Not Prepared 17	Not Listed
Chemical name	Chile	Argentina	Venezuela	Peru
Nickel	A1 - Confirmed Human Carcinogen	A5 - Not Suspected as a human carcinogen	A5 - Not an Alleged Carcinogen in Humans	A1 - Confirmed Human Carcinogen
Chromium	A4 - Not Classifiable as a Human Carcinogen	A4 - Not classifiable as a human carcinogen	A4 - Not Classified as a Carcinogen in Humans	-

Developmental toxicity None known

Chronic toxicity Prolonged exposure may cause chronic effects. CNS and psychiatric effects, Parkinson-like symptoms. Languor, sleepiness and weakness in legs. A stolid masklike appearance of face, emotional disturbances such as uncontrollable laughter and spastic gait with tendency to fall in walking and findings in more advanced cases. Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure. Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization of susceptible persons. Repeated or prolonged exposure may cause central nervous system damage.

Target organ effects blood, Eyes, Jaw, kidney, liver, Lungs, Nasal Cavities, respiratory system, Skin, Teeth.

Neurological effects Repeated or prolonged exposure may cause central nervous system damage. Prolonged or excessive exposure to manganese in dust or fume may cause irreversible central nervous system damage (Manganism). Symptoms resemble Parkinson's disease and include tremors, impaired speech, mask like face and impaired movement.

Numerical measures of toxicity No data available

The following values are
calculated based on chapter 3.1
of the GHS document

ATEmix (oral) 732 mg/kg
ATEmix (dermal) 5 mg/kg
ATEmix (inhalation-gas) 10 mg/l

12. Ecological Information

12.1. Ecotoxicity 4.60000000000001% of the mixture consists of component(s) of unknown hazards to the aquatic environment

12.2 Persistence and degradability Product/Substance is inorganic. not applicable.

12.3 Bioaccumulative potential No information available.

12.5 Results of PBT and vPvB assessment The components in this formulation do not meet the criteria for classification as PBT or vPvB

12.6 Other adverse effects

13. Disposal Considerations

Waste treatment methods Should not be released into the environment.
Waste from residues/unused Reuse or recycle.

products

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

California Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Nickel	Toxic Ignitable
Chromium	Toxic Corrosive Ignitable
Molybdenum	Ignitable
Copper	Toxic

14. Transport Information

DOT			
Chemical name	U.S. - DOT Reportable Quantities	DOT Marine Pollutant	DOT Severe Marine pollutant
Nickel	100 lbs RQ (The RQ for these hazardous substances is limited to those pieces of the metal having a diameter smaller than 100 µm (0.004 inches).); 45.4 kg RQ (The RQ for these hazardous substances is limited to those pieces of the metal having a diameter smaller than 100 µm (0.004 inches).)	-	-
Chromium	5000 lbs RQ (The RQ for these hazardous substances is limited to those pieces of the metal having a diameter smaller than 100 µm (0.004 inches).); 2270 kg RQ (The RQ for these hazardous substances is limited to those pieces of the metal having a diameter smaller than 100 µm (0.004 inches).)	-	-
Copper	5000 lbs RQ (The RQ for these hazardous substances is limited to those pieces of the metal having a diameter smaller than 100 µm (0.004 inches).); 2270 kg RQ (The RQ for these hazardous substances is limited to those pieces of the metal having a diameter smaller than 100 µm (0.004 inches).)	-	DOT regulated severe marine pollutant (powder)

TDG Not regulated

MEX Not regulated

IMO / IMDG Not regulated

Chemical name	IMO/IMDG - Marine Pollutants
Copper	IMDG regulated marine pollutant (Listed in the index, listed under Copper metal powder)

ICAO / IATA-DGR Not regulated

15. Regulatory Information

Chemical name	TSCA
Nickel	Present
Chromium	Present
Silicon Metal	Present

Iron	Present
Boron	Present
Molybdenum	Present
Copper	Present
Carbon	Present
Chemical name	Bolivia - hazardous substances regulated under Bolivia's Environmental Regulations for the Industrial Manufacturing Sector
Nickel	Present

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

Chemical name	CAS-No	weight-%	SARA 313 - Threshold Values %
Nickel	7440-02-0	> 50	-
Chromium	7440-47-3	10 - 25	Present
Silicon Metal	7440-21-3	3 - 5	-
Iron	7439-89-6	3 - 5	-
Boron	7440-42-8	3 - 5	-
Molybdenum	7439-98-7	2.5 - 3	-
Copper	7440-50-8	2.5 - 3	-
Carbon	7440-44-0	0.1 - 1	-

SARA 311/312 Hazard Categories

Acute health hazard	yes
Chronic Health Hazard	yes
Fire Hazard	no
Sudden release of pressure hazard	no
Reactive Hazard	no

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Nickel	Not Applicable	Present	Present	Not Applicable
Chromium	Not Applicable	Present	Present	Not Applicable
Copper	Not Listed	Present	Present	Not Listed

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Nickel	100 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 45.4 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)	-	100 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 45.4 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)
Chromium	5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if	-	5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if

	the diameter of the pieces of the solid metal released is >100 µm)		the diameter of the pieces of the solid metal released is >100 µm)
Copper	5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)	-	5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)

U.S. State Regulations

California Proposition 65 This product contains the following Proposition 65 chemicals:

Chemical name	California - Proposition 65 - Carcinogens List	California - Proposition 65 - Developmental Toxicity	California - Proposition 65 - Reproductive Toxicity	California - 22 CCR - Toxic and Extremely Hazardous Carcinogenic Wastes
Nickel	carcinogen, initial date 10/1/89 (metallic)	-	-	-

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Nickel	sn 1341 (dust and fume)	Carcinogen; Extraordinarily hazardous	Environmental hazard; Special hazardous substance Present
Chromium	sn 0432	Carcinogen; Extraordinarily hazardous	Environmental hazard; Special hazardous substance Present
Silicon Metal	sn 3125 (powder)	Present (dust, exempt when encapsulated or if particulates are not present and cannot be substantially generated through use of the product)	Present
Boron	sn 3201	Not Listed	Not Listed
Molybdenum	sn 1309	Present	Present
Copper	sn 0528	Present	Environmental hazard (dust and fume) Present (dust and fume)

CANADA

WHMIS Statement

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

Chemical name	WHMIS Classifications of Components
Nickel	D2A, D2B; B6, D2A (Raney)
Chromium	Uncontrolled product according to WHMIS classification criteria
Silicon Metal	B4
Iron	Uncontrolled product according to WHMIS classification criteria
Molybdenum	Uncontrolled product according to WHMIS classification criteria
Copper	Uncontrolled product according to WHMIS classification criteria
Carbon	Uncontrolled product according to WHMIS classification criteria

16. Other Information

Global Automotive Declarable Substance List Classifications

Chemical name	Global Automotive Declarable Substance List Classifications	Global Automotive Declarable Substance List Thresholds
Nickel	Declarable Substance (FI)	0.1 %
Copper	Declarable Substance (FI)	0.1 %

<u>NFPA</u>	Health hazard 2	Flammability 0	Instability 0	Physical and Chemical Hazards -
<u>HMIS</u>	Health hazard 2	Flammability 0	Physical hazards 0	Personal precautions -
Issuing Date	2015-09-12			
Revision Date	2015-12-14			
Revision Note	No information available			

Disclaimer

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End of Safety Data Sheet